



BREASTFEEDING

It Rocks!



All India Institute of Medical Sciences Rishikesh

अखिल भारतीय आयुर्विज्ञान संस्थान ऋषिकेश

There is NO substitute for mother's milk.



PUMPING AND STORAGE OF BREAST MILK

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INTRODUCTION

- ▶ Breast milk is best feeding for babies.
- ▶ The scientific evidence shows that exclusive breast feeding in the first six months of life can cut down under five child mortality by 13-15%.
- ▶ There are some situation that when the mother cannot directly breast feed her baby.
- ▶ Experts don't recommend pumping breast milk for the first four to eight weeks. "Baby has a natural [sucking] rhythm that can help increase milk supply.

A pump won't remove as much milk as babies do."



Health Impact of Not Breastfeeding

The chart below from the 2011 Surgeon General's Call To Action to Support Breastfeeding report highlights the excess risk of various health outcomes associated with NOT breastfeeding.

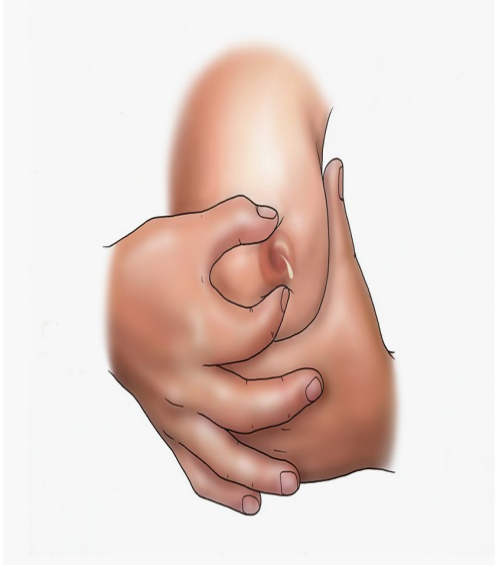
Risk of not breast feeding for infants	Excess risk(100%)
Otitis media	100
Atopic dermatitis	47
Diarrhea and vomiting	178
Asthma with family history	67
Childhood obesity	32
Type 2 diabetes mellitus	64
Acute myelogenous leukemia	23
Acute lymphocytic leukemia	18
Sudden infant death syndrome	56
Necrotizing enterocolitis(preterm infants)	138

Need of breast pumping

- ▶ There are many situations in which a mother may need to pump milk from her breasts.
- ▶ **Short term:** occasional separations; mother on medication incompatible with breastfeeding; breast engorgement; severe nipple soreness; or increasing milk supply.
- ▶ **Long term:** Premature or hospitalized infant or regular separations such as those encountered with returning to work or school.



Types of breast pumps for milk expression



Hand
expression



Manual
pump



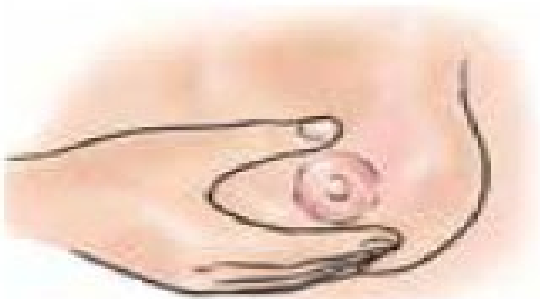
Electrical
pump



How to express breast milk

- ✓ Wash your hands with soap and water. If soap and water are not available, use an alcohol-based hand sanitizer that has at least 60% alcohol.
 - ✓ Make sure the area where you are pumping and your pump parts and bottles are clean.
 - ✓ Do not need to wash your breasts and nipples before pumping.
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- ▶ To start flowing without your baby there, you

Method of hand expression



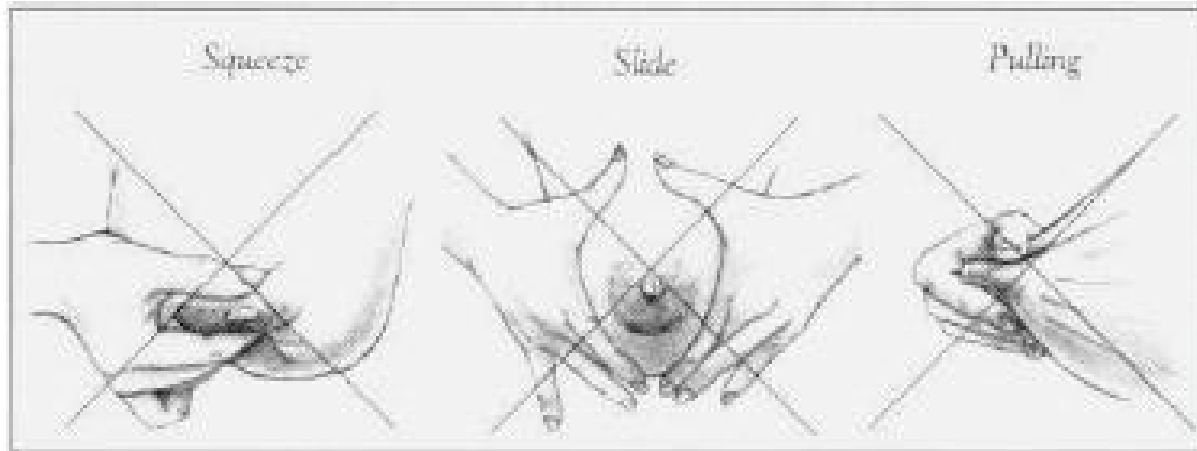
Press (back towards your chest)



Compress



Relax



Pumping: Ways To Express Breast Milk

Type	How it works	What's involved
Hand expression https://youtu	You use your hand to squeeze and press on your breast to remove milk.	<ul style="list-style-type: none">◦ Requires practice, skill, and coordination.◦ Gets easier with practice and can be as fast as pumping.◦ Good if you are not often away from your baby or you need an option that is always with you. But all moms should learn how to hand express in case of emergency.
Manual pump https://youtu	You use your hand and wrist to operate a hand-held device to pump the milk.	<ul style="list-style-type: none">◦ Requires practice, skill, and coordination.◦ Useful for occasional pumping if you are away from your baby only once in a while.◦ May put you at higher risk of breast infection.



Type	How it works	What's involved
Electric breast pump https://youtu.be/...	Runs on battery or plugs into an electrical outlet.	<ul style="list-style-type: none"> ◦ Easier for some ◦ Double pumping (pumping both breasts at the same time) may collect more milk in less time, which is helpful if you are going back to work ◦ Need a place to clean and store the equipment between uses. ◦ Electric pumps require batteries or a place to plug in.



Storage of breast milk

After each pumping, you can:

- ▶ **Keep milk at room temperature.** Breast milk is **OK** for up to 4 hours after pumping at room temperature (up to 77°F).
- ▶ **Refrigerate it.** Breast milk is OK in the refrigerator for up to 4 days.
- ▶ **Place milk in the freezer.** If you're not going to use refrigerated breast milk within 4 days of pumping, freeze it right after pumping.
- ▶ **Use cooler packs.** Put breast milk in a cooler or insulated cooler pack with frozen ice packs for up to 24 hours after pumping. After 24 hours in a cooler

Guide to storing fresh breast milk for use with healthy, full-term babies

Place	Temp	How long	Things to know
Countertop, table	Room temp (up to 77°F)	Up to 4 hours	<ul style="list-style-type: none"> ✓ Containers should be covered and kept as cool as possible. ✓ Covering the container with a clean cool towel may keep milk cooler. ✓ Throw out any leftover milk within 2 hours after the baby is finished feeding.
Refrigerator	40°F	Up to 4 days	<ul style="list-style-type: none"> ✓ Store milk in the refrigerator. ✓ When at work, it's OK to put breast milk in a shared refrigerator. ✓ Be sure to label the container clearly.
Freezer	0°F or colder	Within 6 months is best. Up to 12 months is acceptable.	<ul style="list-style-type: none"> ✓ Store milk in freezer where the temperature is most constant. ✓ Milk stored at 0°F or colder is safe for longer durations, but the quality of the milk might not be as high.

Source: Adapted from 7th Edition American Academy of Pediatrics (AAP) Pediatric Nutrition Handbook (2014); 2nd Edition AAP/American College of Obstetricians and Gynecologists (ACOG) Breastfeeding Handbook for Physicians (2014); Academy of Breastfeeding Medicine (ABM) Clinical Protocol #8 Human Milk Storage Information for Home Use for Full-Term Infants (link is external) (2017); CDC Human Milk Storage Guidelines (2018).

Storage: Tips for freezing milk

- ▶ Clearly label milk containers with the date the milk was expressed. Include your child's name if you are giving the milk to a child care provider.
- ▶ Freeze in small amounts (2 to 4 ounces, or $\frac{1}{4}$ to $\frac{1}{2}$ cups) for later feedings.
- ▶ Leave an inch or so from the milk to the top of the container, because it will get bigger when freezing.
- ▶ Store milk in the back of the freezer, not on the shelf of the



Thaw the breast milk

► Thaw the
oldest breast
milk first

► Does not

How to unfreeze breast milk



References

■ The Academy Of Breastfeeding Medicine

Protocol #8: Human milk storage information for home use for healthy full-term infants

■ The American Academy of Pediatrics

www.healthychildren.org/English/ages-stages/baby/breastfeeding/Pages/Storing-and-Preparing-Expressed-Breast-Milk.aspx

www.breastfeedo.com

Guide to storing thawed breast milk

	Room temperature (up to 77°F)	Refrigerator (40°F)	Freezer (0°F or colder)
Thawed breast milk	1 to 2 hours	Up to 1 day (24 hours)	Do not refreeze.

Source: Adapted from

ABM Clinical Protocol #8 Human Milk Storage Information for Home Use for Full-Term Infants
(link is external) (2017).

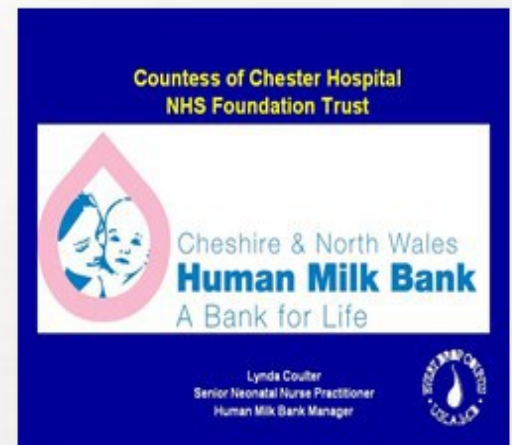


Human Milk Banking Association

- ✓ Non-profit association of donor human milk banks.
- ✓ Established in 1985
- ✓ To set standards for and to facilitate establishment and operation of milk banks.

Milk banking in India

- Asia's first human milk bank was set up at the Lokmanya Tilak Municipal General Hospital (LTMGH) in Mumbai in 1989.
- 25 human milk banks across India - most of them sited in the western states of Maharashtra and Gujarat.
- Performing vital services for premature babies requiring temporary intervention in cases of delayed lactation, abandonment or illness.
- ❖ Milk is cooled and poured into autoclave stainless steel containers measuring 150cc, 250cc or 300cc.
- ❖ Pasteurized at 65 degrees Celsius for 30 minutes and then frozen at minus 20 degrees Celsius.
- ❖ It can be stored for up to six months.



Who can donate the milk?

Donors

- Their babies must be in general good health.
 - Cannot be taking any medications or herbal supplements .
 - Undergo a thorough medical history .
 - Must also keep at least 100 oz of milk on hand for their own babies.
 - Must not have had a positive blood test result for HIV, hepatitis B or C, or syphilis.
-
- ✓ Their sexual partners cannot be at risk for HIV.
 - ✓ Must not use illegal drugs.
 - ✓ Must not smoke or use tobacco products.
 - ✓ Cannot have had an organ or tissue transplant or a blood transfusion in the last 12 months.
 - ✓ Must not consume more than two ounces or more of alcohol per day .

MILK SUPPLY TIPS AFTER RETURNING TO WORK

1

**Always latch-on
whenever you're
with the baby**



Don't be tempted to give a bottle of EBM just because you have extra stash

2

**Nurse your baby
before & after
work**



Very efficient to empty the breasts and stimulate fast milk production.

3

**Keep a regular
pumping schedule
at work**



Make pumping a serious commitment. Set a daily reminder so you won't accidentally miss it.

4

**Do extra pumping
at home every
weekday & weekend**



Even if it's just once in the morning, these extra sessions are great to keep a healthy supply.

5

**Avoid stress at
workplace**



Stress may cause milk supply drop and hinders secretion of oxytocin (thus, makes it difficult to get let-down)

6

**Let the baby nurses
through the night**



It gives your breast extra stimulation to maintain your milk production. Alternatively, pump in the middle of the night

7

**Eat healthy & stay
hydrated**



Drink to thirst and have a balanced meal. Take milk-booster food or lactogenic herbs if needed

8

**Do power pumping
bootcamp**



Do power pumping at least 2x daily for a week. Or do a bootcamp by power pumping 5x a day in a weekend

THANK YOU FOR
BREASTFEEDING ME!



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